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| MARSHALL, GERSTEIN & BORUN LLP | | | EXAMINER | |
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| CHICAGO, IL 60606 | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/675,135

Applicant(s)

BROOKMAN, MICHAEL J.

Examiner

Annette F. Dixon

Art Unit

3771

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date all IDS
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This Office Action is in response to the amendment filed on May 7, 2008.

Examiner acknowledges claims 1-4, and 6-28 are pending in this application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4, 6, 9, 10, 13-15, 17, 18, 20, 21, 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mucha (DE19503027) in view of Hilton et al. (EP 0 241 188 A1).

As to Claims 1, 9, and 23-26, Mucha discloses a breathing apparatus comprising: a tank (9) adapted to contain air under pressure to enable the delivery of said pressurized air to the user of said apparatus during a clean air mode; a filter system (7) adapted to enable ambient air to pass through a filter medium to delivery filtered air to said user of said apparatus during a filtered air mode, the filter medium having a mesh that is sufficient to one of trap solid particles in ambient air and enable ambient air in need of cleaning to have a residence time in contact with media that is sufficient to decontaminate contaminating vapors and gases From said ambient air to form clean air; a means for moving said ambient air (8') into said filtering system (7), through said filter

medium in said filtering system (7) and thence into operative relationship with a user of the apparatus during said filtered air mode; a valve assembly (4) comprising a first valve (22) associated with said tank (9) and a second valve (23) associated with said filter system (7), the valve assembly (4) adapted to control the flow of cleaned air from said filter system into said filtering mode and pressurized air from said tank in said clean air mode, such that said pressurized air supplied from said tank opens said first valve (22) and closes said second valve (23) to actuate said valve assembly (4) from the filtered mode to the clean air mode while continuously providing a supply of breathable air to the user; and a first switch (11) operatively coupled to the tank (9) and selectively enabling switching between the clean air mode and the filtered air mode (via communication with elements 12 and 13 to move the valve assembly). Yet, Mucha does not expressly disclose a pressure regulator. However, at the time the invention was made the use of pressure regulators was known. Specifically, Hilton teaches a regulator means (34) to enable delivery of said pressurized gas to a user of said apparatus for the purpose of regulator means (34) of Hilton et al. is to reduce the pressure of the breathable gas leaving pressurized tank (33) so that it may be delivered to a user at a safe pressure. Therefore, it would have been obvious to modify the pressurized tank of Mucha to employ a regulator means, as taught by Hilton et al to reduce the pressure of the breathable gas leaving pressurized tank so that it may be delivered to a user at a safe pressure.

As to Claims 2, 11, 12, and 14, Hilton et al. (fig.7) teach plural filter media (9), which is sufficient to trap particulates.

As to Claims 3 and 10, Hilton et al. (figs.4-6,8,9) teach a mask adapted to establish and maintain a seal with the face of a user so as to isolate at least the nose and mouth of said user from ambient air, and adapted to maintain a seal under conditions of positive pressure within the mask (note separate valves for exhalation and inhalation).

As to Claims 4, 13, 17, 18, 20 and 21, Mucha (fig.1) discloses a first conduit (6) disposed in operative relationship to and between said cylinder (9) and said mask (1), said second conduit means (5) being disposed between said filter system (7) and said mask (1), and said at least one valve (4) is adapted to control the flow of cleaned air from said filter system and/or pressurized breathable gas from said cylinder to said mask.

As to Claims 6 and 15, Hilton et al. teach a one-way exhaust valving means (4) operatively associated with the mask and operative when a user exhales whereby increasing the internal pressure in said mask above the pressure imposed by said powered forcing of ambient air through said filter system, and above the pressure imposed by gas being fed from said cylinder.

4. Claims 7, 8, 16, 19, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mucha (DE19503027) in view of Hilton et al. (EP 0 241 188 A1) as applied to claim 1 and 9 above, and further in view of Bartels & Rieger (DE 3,512,644).

As to Claims 7, 8, 16, 19, 22, 27 and 28, the system of Mucha/Hilton et al. discloses all of the recited elements, yet does not expressly disclose a means for

manually opening or closing said at least one valve by said user. However, at the time the invention was made, the use of a manual user-operated valve was known. Specifically, Bartels & Rieger teaches manually increasing the flow of gas from a gas cylinder (11) by opening a valve (19). The purpose of providing a manually actuated valve is to provide a user with means for switching between a filtered air source and a compressed air source thereby enabling a user to conserve the compressed air source for as long as possible (see abstract). Further, one of ordinary skill would recognize that the amount of oxygen required by users differs from one person to the next; consequently, a wearer may prefer to have manual control over when and how much oxygen is dumped into the system. Therefore, it would have been obvious to further modify Mucha to include a manually operated valve that selects between the compressed air source and the filtered air source because it would have provided a user with means for switching between a filtered air source and a compressed air source thereby enabling a user to conserve the compressed air source for as long as possible as taught by Bartels & Rieger.

Response to Arguments

5. Applicant's arguments filed October 29, 2007 have been fully considered but they are not persuasive. Applicant asserts: 1) the prior art made of record does not teach the ability of the valve assembly to continuously provide a supply of breathable air to the user, and 2) the switch does not enable the selectively enabling switching between the clean air mode and the filtered air mode. Examiner respectfully disagrees. Regarding

Applicant's assertions, The controller element (13) is connected to the atmospheric pressure sensor (11) via the controller (12) in order to enable the comparison of the change in pressure to direct the movement of the gases. Intrinsically, the comparative causes facilitate the movement of the valve by opening the pressurized air to the user while closing the filtered air from the user. Therefore it is the comparative signals of the change in pressure supplied by the sensor performing the analysis of the pressure variants that change the directionality of the valve allowing for breathable air to be provided to the user and enabling the switching of the breathable gas sources. Thus, in light of the aforementioned reasoning, the rejection of the claims has been maintained.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Annette F. Dixon whose telephone number is (571) 272-3392. The examiner can normally be reached on Monday thru Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Justine Yu can be reached on (571) 272-4835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Justine R Yu/
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